A new species of *Elaphoglossum* (Pteridophyta: Lomariopsidaceae) from the Tristan da Cunha island group, central South Atlantic

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Elaphoglossum campylolepium J.P. Roux (Pteridophyta: Lomariopsidaceae) from the Tristan da Cunha island group in the south Atlantic ocean is described.

Elaphoglossum campylolepium J.P. Roux (Pteridophyta: Lomariopsidaceae) van die Tristan da Cunha eilandgroep in die suid-Atlantiese oseaan word beskryf.

Key words: *Elaphoglossum campylolepium*, Lomariopsidaceae.

Introduction

While preparing a review of the *Elaphoglossum* species on the south Atlantic islands, an undescribed species was found. It was previously mistaken for *E. succisifolium* (Thouars) Moore. A detailed account of the species will be published elsewhere.

Description

Elaphoglossum campylolepium *J.P. Roux*, sp. nov.

E. succisifoli (Thouars) Moore affinis sed rhizomate tenui; frondibus brevioribus; lamina paleis proximalibus curvatis et conduplicatis, marginibus longis fimbriatis; paleis inter sporangia, sporis stramineis, porcatis, porcis reticulatis, et aculeatis differt.

TYPUS:— Inaccessible Island, plateau at west end, tree fern country, 450 m, 26 February 1938. *Christophersen 2556* (O, holotypus!).

Litho- or epiphytic. *Rhizome* widely creeping, branched, up to 3 mm in diameter, densely set with hard, dark reddish-brown, narrowly lanceolate, cuneate, cordate or cordate-imbricate scales; scales entire or unevenly crenulate, often with small glandular cells along the margins, up to 4.2 × 0.8 mm. *Fronds* dimorphic, the fertile overtopping the sterile, widely spaced, erect or arching, up to 230 mm long. *Stipe* terete, proximally dark brown, distally stramineous, the sterile up to 125 mm long, the fertile up to 155 mm long × 1.2 mm in diameter, sparsely to densely set with reddish-brown, often dark-centred, lanceolate to narrowly ovate, cordate to cordate-imbricate scales, scales proximally fimbriate, distally often with small glandular cells along the margins, up to 3.8 mm × 1.5 mm. *Lamina* simple, entire, firmly herbaceous to coriaceous, the sterile ovate to narrowly oblong, up to 76 × 28 mm, the fertile narrowly oblong, up to 80 × 20 mm, adaxially and abaxially sparsely to densely set with pale brown, often amorphous, proximally curved and conduplicate, lanceolate to narrowly lanceolate, cuneate to cordate-imbricate, fimbriate scales up to 4 × 1.8 mm, those on the adaxial surface slightly smaller than those on the abaxial surface, the fertile frond abaxially relatively densely set with similar but centrally dark brown scales among the sporangia. *Venation* obscure, free. *Sporangia* acrostichoid, annulus (11–) 14 (–18)-celled (n = 20). *Spores* stramineous, ridged, ridges reticulate, aculeate, (35–) 42 (–47.5) × (25–) 30 (–35) μm (n = 40) (Figures 1 and 2).

The specific epithet *campylolepium* is derived from the Greek words *campylos* (= curved) and *lepis* (= scale), and refers to the scales on the adaxial and abaxial surfaces of the lamina.

Diagnostic features and affinities

Elaphoglossum campylolepium superficially resembles *E. succisifolium* in the lamina scales but differs in the thinner rhizomes and smaller fronds. In *E. campylolepium* the lamina scales on the adaxial and abaxial surfaces are proximally curved and conduplicate (Figures 1 A – H), whereas in *E. succisifolium* the scales on the adaxial surface of the lamina are generally appressed. The lamina scale margins in *E. campylolepium* are also more laxely and longly fimbriate. Similar but centrally lignified scales also occur sparsely among the acrostichoid sporangia on the fertile frond, whereas in *E. succisifolium* they are largely confined to the midrib. The spores of *E. succisifolium* are not as prominently ridged as those of *E. campylolepium* but the spines are longer and sparser (Figures 2A and 2B).

Geographical distribution and habitat

Elaphoglossum campylolepium is currently known only from Tristan da Cunha and Inaccessible Island but the species may occur elsewhere as it is easily confused with *E. succisifolium*. The two species often grow together.

The new species is evidently restricted to higher elevations on the islands. On Inaccessible Island it is known from *ca* 450 m and on Tristan da Cunha it occurs from *ca* 550 to 700 m.

E. campylolepium occurs in a wide range of habitats ranging from exposed but moist mossy rocks to being epiphytic on the caudices of the tree fern *Blechnum palmiforme* (Thouars) Moore. The species is also known to occur in *Phylica arborea* Thouars scrub or forests.

Specimens examined

Inaccessible Island

Plateau at west end, 450 m. *Christophersen 2556* (O); slopes of Long Ridge, *ca* 450 m, *Roux 2114* (NBG); summit near end of path, West Road, 500 m, *Roux 2132* (NBG).

Tristan da Cunha

West of Third Gulch, 550 – 600 m, *Mejland 616* (O); above

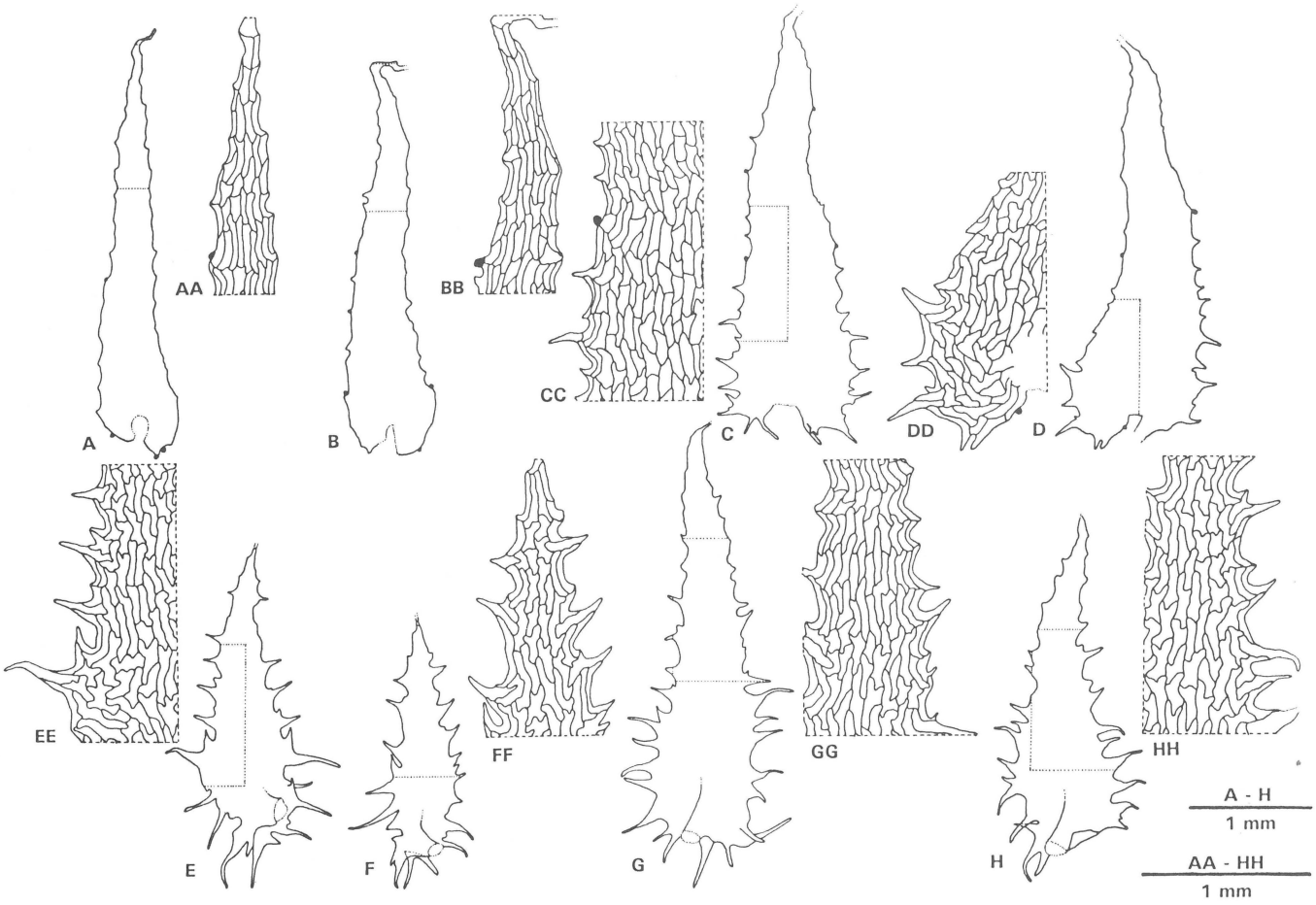

Figure 1 Scales and scale sections of *Elaphoglossum campylolepium* J.P. Roux. A, B: rhizome scales; C, D: stipe scales; E, F: lamina scales – adaxial surface; G, H: lamina scales – abaxial surface. AA – HH: sections of scales A – H showing the cellular structure. From *Christophersen 2556* (O).

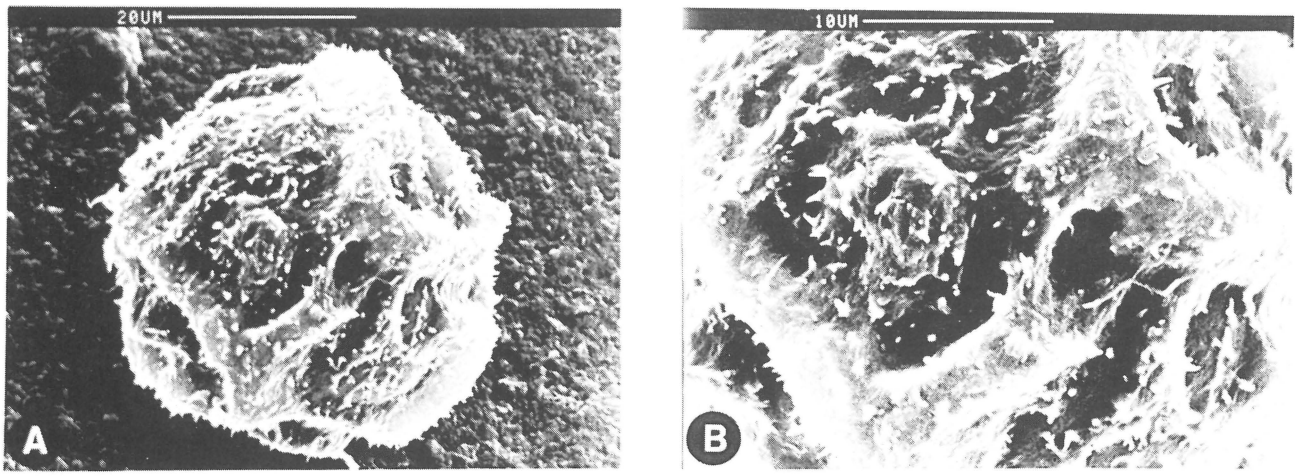

Figure 2 A spore of *Elaphoglossum campylolepium* J.P. Roux. A, shape; B, detail of surface sculpturing. From *Christophersen 2556* (O).

Pigbite, *Mejland 1635* (O); above Burntwood, 600 m, *Mejland 821* (O); west end of Jim's Marsh, near Cave Gulch, 700 m, *Scott s.n.* (NBG).

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